

Claims

[c1] What is claimed is:

1. A drying process for wafers, the drying process comprising:

positioning the wafers to be dried in a cleaning device full of IPA vapor and replacing moisture out of the wafers with the IPA vapor;

exhausting gas steam including the IPA vapor from the cleaning device into a scrubber, the scrubber comprising at least a solvent for dissolving the IPA vapor and an exhaust outlet for discharging gas mixture of the IPA vapor and the solvent for dissolving the IPA vapor; and

adjusting a flow rate of the solvent in the scrubber to increase a concentration of the IPA vapor in the cleaning device and thus obtain good uniformity for drying the wafers.

[c2] 2. The drying process of claim 1 wherein surfaces of the wafers comprise an uneven profile.

[c3] 3. The drying process of claim 1 wherein the wafers comprise a plurality of holes thereon.

[c4] 4. The drying process of claim 3 wherein the holes com-

prise via holes or contact holes.

- [c5] 5. The drying process of claim 1 wherein the solvent comprises water.
- [c6] 6. The drying process of claim 5 wherein the flow rate of the solvent ranges between 5 L/min and 10 L/min.
- [c7] 7. The drying process of claim 1 wherein the cleaning device comprises nitrogen.
- [c8] 8. A drying process for wafers, the drying process comprising:
positioning the wafers to be dried in a cleaning device full of IPA vapor and replacing moisture out of the wafers with the IPA vapor; and
reducing an exhaust rate of the IPA vapor from the cleaning device to increase a concentration of the IPA vapor in the cleaning device and thus obtain good uniformity for drying the wafers.
- [c9] 9. The drying process of claim 8 further comprising exhausting gas steam including the IPA vapor from the cleaning device into a scrubber, the scrubber comprising at least a solvent for dissolving the IPA vapor and an exhaust outlet for discharging gas mixture of the IPA vapor and the solvent for dissolving the IPA vapor.

- [c10] 10. The drying process of claim 9 further comprising adjusting a flow rate of the solvent in the scrubber to reduce the exhaust rate of the IPA vapor from the cleaning device.
- [c11] 11. The drying process of claim 10 wherein the solvent comprises water.
- [c12] 12. The drying process of claim 11 wherein the flow rate of the solvent ranges between 5 L/min and 10 L/min.
- [c13] 13. The drying process of claim 8 wherein the cleaning device comprises nitrogen.
- [c14] 14. The drying process of claim 8 further comprising adjusting a partial pressure of the IPA vapor to reduce the exhaust rate of the IPA vapor from the cleaning device.
- [c15] 15. The drying process of claim 8 further comprising adjusting an evaporation rate of the IPA vapor to reduce the exhaust rate of the IPA vapor from the cleaning device.
- [c16] 16. The drying process of claim 8 wherein surfaces of the wafers comprise an uneven profile.
- [c17] 17. The drying process of claim 8 wherein the wafers comprise a plurality of holes thereon.
- [c18] 18. The drying process of claim 17 wherein the holes

comprise via holes or contact holes.